Mystery of the Cliffs



Teenage Mutant Ninja Turtles, Copyright Mirage Studios, 1992
Illustration by Shelly Fischman

U.S. Department of the Interior
Bureau of Land Management



United States Department of the Interior

BUREAU OF LAND MANAGEMENT

WASHINGTON, D.C. 20240

IN REPLY REFER TO:

Dear Educator:

The Bureau of Land Management (BLM), a Federal agency of the U.S. Department of the Interior, is pleased to present "Mystery of the Cliffs." This video is designed to introduce school children in the early grades to the concept of "stewardship" as it relates to our country's cultural resources. The message is that we must all accept responsibility for the care of these archaeological and historical treasures that lie, mostly unattended, throughout America's vast public lands. A companion video on the same tape, entitled "Solving the Mystery," is intended to reinforce and expand upon the message of "Mystery of the Cliffs." A children's activity booklet complements the video programs.

The BLM produced the "Mystery of the Cliffs" in partnership with the popular Teenage Mutant Ninja Turtles, calculating that the "totally awesome foursome" would help focus children's attention on the important message of the video. An estimated 5 million historical and archaeological sites are located on the public lands managed by the BLM. Because many are situated in remote locations, they are vulnerable to vandalism and destruction and are being damaged at an alarming rate. Education of America's young people about the importance and value of our Nation's cultural heritage is critical if these resources are to be enjoyed by present and future generations.

In addition to the video package, we have included an article published in the April 1992 issue of Science and Children, a professional magazine for teachers of science in the elementary and middle grades published by the National Science Teachers Association. The article and companion pull-out poster feature a historic Spanish presidio located on the public lands managed by the BLM in southern Arizona. The article and poster include classroom activities that promote children's thinking and reasoning skills through the study of archaeology. The article also explains how educators can obtain a 39-page booklet of activities on the fundamentals of archaeology by writing the BLM.

The video package and the magazine article with the poster have been produced as part of the BLM's Cultural Heritage Education Program, described in the enclosed brochure. This program supports the efforts of President Bush to strengthen students' competency in science and math. We hope that educators will find these materials to be valuable and exciting educational tools. Please let us know what you think by returning the enclosed postage paid response card.

Sincerely,

Director

Enclosures



Response Card — Please answer the questions and return to the BLM. No postage is needed.

Name _____

School District _____ School _____

Address _____

City _____ State _____ Zip _____ Phone _____

"Mystery of the Cliffs" and "Solving the Mystery" Videos:

	1	2	3	4	Write in Total
Times videos shown	☐	☐	☐	☐	_____
Total attendance (all showings)	1-4 ☐	5-14 ☐	15-39 ☐	40-64 ☐	_____

Average age of audience _____. Was there discussion before or after showing(s)? Yes ☐ No ☐

On a scale of 1-10, how do you rate —

"Mystery of the Cliffs"?	Poor	1	2	3	4	5	6	7	8	9	10	Excellent
"Solving the Mystery?"	Poor	1	2	3	4	5	6	7	8	9	10	Excellent
Companion Children's Guide?	Poor	1	2	3	4	5	6	7	8	9	10	Excellent

"Science in Process: Discovering the Past at Santa Cruz" (magazine article and pull-out poster):

Were the suggested activities used in the classroom? Yes ☐ No ☐ Average age of student? _____

How do you rate the activities?	Poor	1	2	3	4	5	6	7	8	9	10	Excellent

Would you like to receive **BLM heritage education material** produced in the future? Yes ☐ No ☐

U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT
CULTURAL HERITAGE EDUCATION PROGRAM
ANASAZI HERITAGE CENTER
P.O. BOX 758
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Bureau of Land Management
Cultural Heritage Education Program
Anasazi Heritage Center
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The totally awesome Teenage Mutant Ninja Turtles have discovered archeology, and are eager to share their find with the world...well, the kids of the world anyway.

As "Mystery Of The Cliffs" opens, our halfshell heros could not be further from their kind of habitat. While they pitch camp, we learn that their mentor, Master Splinter, has summoned them to the remote desert location for a purpose. But, Splinter himself has yet to make an appearance.

The impulsive Raphael trudges off on his own to explore some nearby cliff dwellings. Later, the others follow, and their adventure begins. They discover a mysterious labyrinth of rooms, and a wall of petroglyphs that provide a glimpse of the original inhabitants. But, they also discover something sinister—their old enemy the Foot Clan is looting a chamber of its "treasures". What happens next is vintage Turtles, but with a special educational twist.

For more information, contact...
Cultural Heritage Education Program
Bureau of Land Management
Anasazi Heritage Center
P.O. Box 758
Dolores, Colorado 81323
(303) 882-4811

BLM

Heritage Education

Mystery of the Cliffs

Copyright Mirage Studios, Inc., 1992 Illustration: Shelly Fischman



U.S. Department of the Interior
Bureau of Land Management

THE MYSTERY OF THE CLIFFS employs a delightful mix of humor, suspense, and fantasy to introduce school children to archaeology, and to the enormous wealth of archaeological and historical resources that lie, mostly unattended, throughout America's vast public lands. The message with the lesson is that we all share responsibility for the stewardship of our Nation's cultural heritage.

The program also includes an instructional, but intriguing "companion video", entitled **SOLVING THE MYSTERY.** This short video is calculated to reenforce, and expand upon the message of **THE MYSTERY OF THE CLIFFS.** A children's activity booklet completes this package, which has been designed to complement classroom instruction or to stand alone.



THE MYSTERY OF THE CLIFFS was produced by Hollywood Promos in association with Surge Licensing Inc., for the Bureau of Land Management (BLM). The BLM is one of nine agencies within the U.S. Department of the Interior. As the largest federal land managing agency, the BLM administers one-eighth of the total land mass of the United States. These lands contain an estimated five million archaeological and historic sites. Because many are situated in remote locations these sites are vulnerable to vandalism and destruction. Education of America's young people about the importance of their Nation's cultural heritage is a key component of BLM's strategy for protecting these resources.

The video package has been designed for children in grades 3 and 4. Teachers are encouraged to use it in conjunction with lessons in social studies, geography, or environmental education. The video is available with closed captioning for the hearing impaired. Educators may obtain a copy by writing the BLM at the address provided on the back of this brochure.

The BLM would like to know what you think. Please share your comments on the video package by completing and returning the postage paid response enclosed with the video.



Fifth grade students use microscopes to study plant seeds used by prehistoric Anasazi Indians 1,000 years ago.

We are committed to using Departmental resources to help develop the Administration's long-range plan for reforming, rejuvenating, and revitalizing our education system for the benefit of all Americans.

Secretary Manuel Lujan, Jr.



Third grade students examine artifacts embedded in the wall of a test trench. The profile simulates an archaeological excavation of an Anasazi Indian pithouse dwelling.



Iron Horse by Joel Eads, age 6

Bureau of Land Management
Office of External Affairs
1849 C St., N.W.
Washington, D.C. 20240
(202) 208-6913

Bureau of Land Management
Division of Recreation, Cultural and
Wilderness Resources
1849 C St., N.W.
Washington, D.C. 20240
(202) 208-3353

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Anasazi Heritage Center
27501 Highway 184
Dolores, Colorado 81323
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BLM

Adventures in the Past
Heritage Education



Indian Ruins by Scott Newman, age 5

U.S. Department of the Interior
Bureau of Land Management

Opportunities

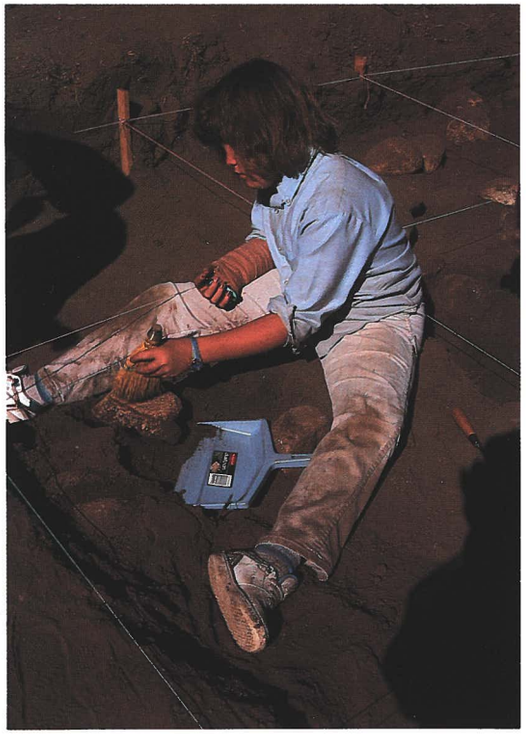
The Bureau of Land Management (BLM) is caretaker of an estimated 5 million historic and archaeological properties on almost 300 million acres of land. These properties provide a dramatic record of humanity's 12,000 year presence in the New World and unparalleled opportunities for teaching young people about America's cultural heritage.

BLM is committed to providing excellence in education and supporting the President's America 2000 education goals through a major new program in heritage education. The new program is an element of BLM's "**Adventures in the Past**" program, which seeks to promote appreciation of America's cultural heritage.

By drawing on the inspiration and intellectual excitement inherent in the study of history and archaeology, BLM hopes to capture the attention of young people at an early age, sustain their interest through hands-on activities, and involve them in increasingly more sophisticated learning experiences throughout higher levels of learning.



BLM's heritage education program is an ambitious effort that will require the cooperation of government, industry, the education community, and the public. Now in its infancy, BLM's multifaceted program ultimately will provide opportunities for students across the Nation in grades K-12. Educational experiences and/or teaching resources will be offered for the school setting as well as for "outdoor classrooms," museums, and other informal learning environments.



Arizona school girl participates in BLM outdoor classroom focusing on ancient peoples in Southeastern Arizona.

Goals

- **Use the vast historic and archaeological resources under the custody of the Bureau of Land Management to support the education of America's children.**

- **Strengthen children's sense of personal responsibility for the stewardship of America's cultural heritage.**

Programs

BLM's strategy calls for the development of the programs below. Efforts in some areas have already begun.

Discovery Campaign — mixed media campaign to expand children's awareness of America's historic and archaeological resources

Young Stewards Club — club for young people to promote interest in history and archaeology and popularize stewardship ethics

Discovery Exhibit — interactive traveling exhibit to encourage children to "discover" the excitement of history and archaeology

Hands-on History and Archaeology — programs and resources to provide hands-on learning experiences in museums, schools, and the outdoors

Partnership Program — cooperative efforts between the BLM and museums, universities, and private businesses in heritage education

Mobile Teacher Resource Center — a traveling van providing teaching aids which use history and archaeology as magnets for learning

Magazine Articles for Teachers — publications to expand teachers' awareness of the possibilities of heritage resources for teaching and learning

History Mysteries — activity books for children tied to history and archaeology themes

Educational TV — programs for children promoting learning through a focus on history and archaeology subjects

Multimedia Teacher Resource Facility — multimedia heritage education library and facility for developing customized teaching aids

Project Archaeology — classroom activities in archaeology to enrich classroom teaching in all subjects

Student and Teacher Internships — opportunities for teachers and students to work and learn side-by-side with professional archaeologists

College Grants Program — grants for college students for work supporting BLM's heritage education program

A children's activity guide to

Mystery of the Cliffs

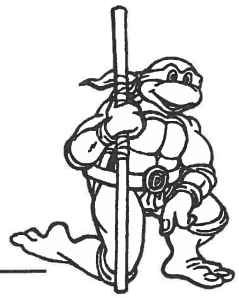


Teenage Mutant Ninja Turtles, Copyright Mirage Studios, 1992

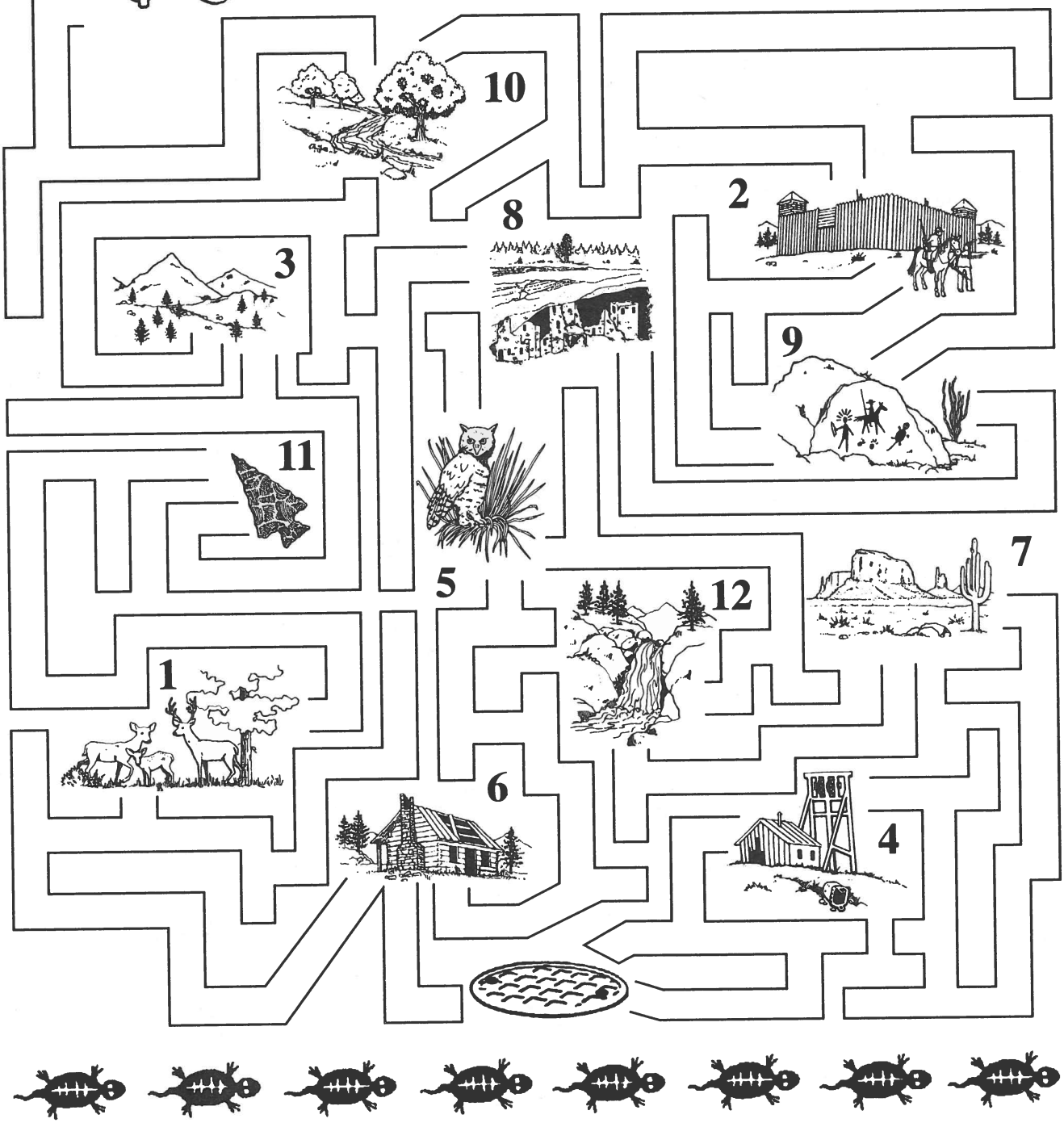
Illustrations by Shelly Fischman

U.S. Department of the Interior
Bureau of Land Management

Maze



"Hey kids, let's see some awesome natural wonders and cultural resources (things and structures made by people). On the way, color all the natural wonders green. Color all the cultural resources red."

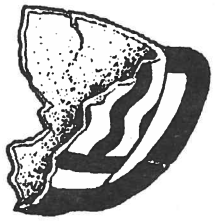


Extension– Write a story, skit, poem, or song about your two tours.

Choose the Right Answer

What do these artifacts tell you about Americans from the past? Circle your answer.

1



a. they bought dishes at a store

b. they only used broken dishes

c. they were artists

d. they knew how to make paint from natural materials

e. c and d

2



a. they had an alphabet

b. they knew creatures from space

c. they used symbols

d. they made petroglyphs with electric power tools

3



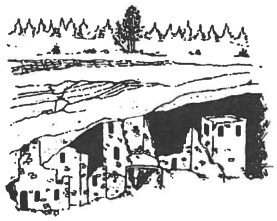
a. they knew where to find the right kind of stone

b. they needed sharp tools

c. they were hunters

d. all of the above

4



a. they had only one bathtub

b. over 100 people lived in one place

c. they had a 2-car garage

d. they were not nomads

True or False?

1. _____ Archaeologists study dinosaurs.
2. _____ Historians study current events.
3. _____ Archaeological and historic sites are important because they often contain gold.
4. _____ When Donatello said "We are all the stewards of America's historic treasures," he meant that everyone has to help take care of America's archaeological and historic sites.
5. _____ 270 million acres of Public Lands belong to you.
6. _____ When you find an ancient or historic artifact you should take it home with you.

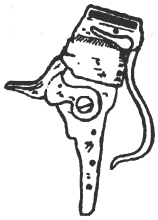
Matching



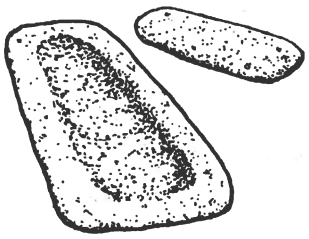
"Hey kids - help me solve these mysteries. Let's see what the artifacts in the first column tell us about the people from the past."

Draw a line connecting the artifact piece in the first column with its more complete picture in the second column. Then draw a line from the complete picture of the artifact to the related picture in the third column.

A



B



C



D



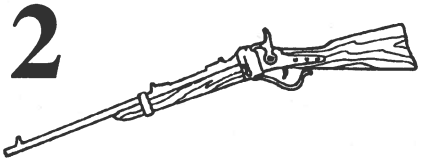
E



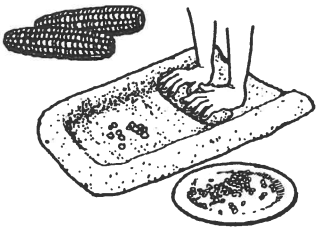
1



2



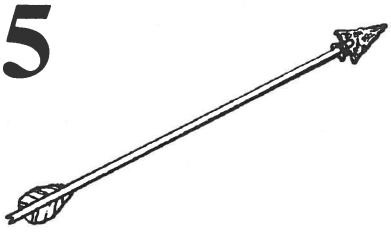
3



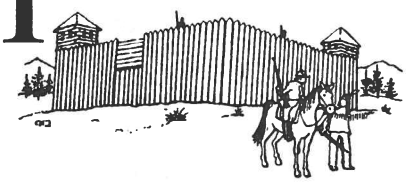
4



5



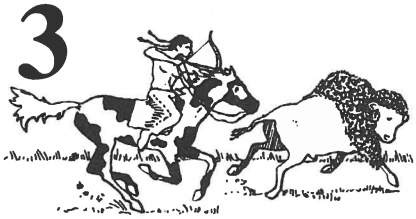
1



2



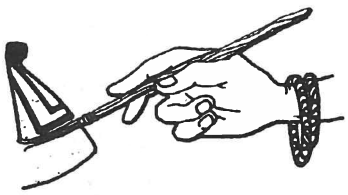
3



4



5



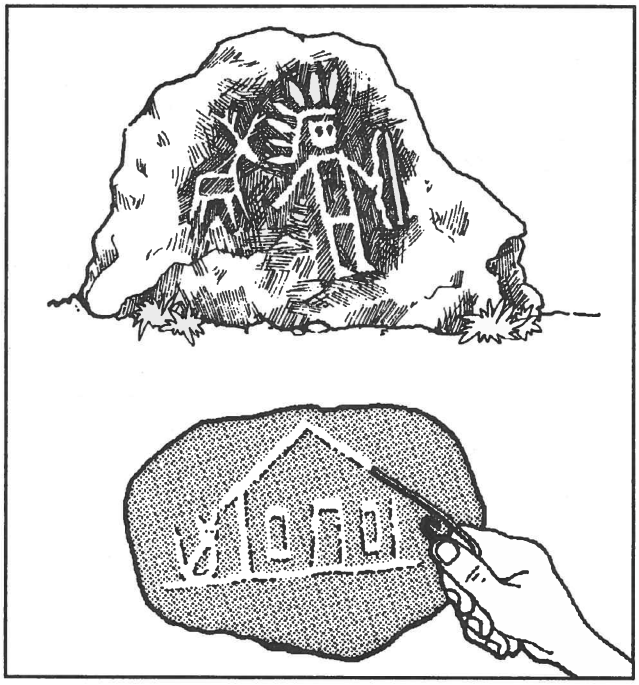
Make Your Own Rock Art

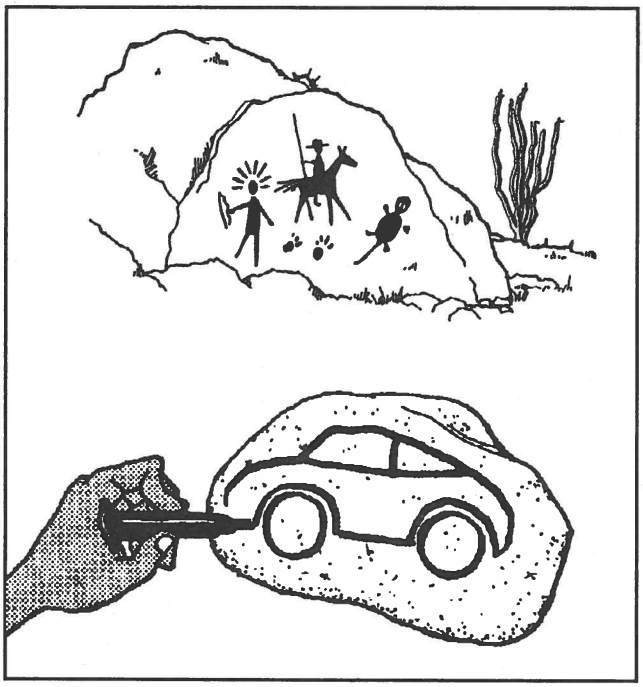
Petroglyphs

Using clay or plaster of paris, make your own petroglyphs. Take a slab of clay or dry plaster and use a paperclip to engrave a design.

Pictographs

You can make another kind of rock art, too. Pictographs are painted on rock, not carved into rock like petroglyphs. Take a small flat piece of stone and use markers or crayons to make pictographs.





Remember!! Never make marks on real rock walls or rock art. If you ever see someone harming rock art, walk away and report him or her to the police.



What is a Steward?

A steward is someone who takes care of things. You already know how to be a good steward at home. Name three things you already take care of at home:

1._____ 2._____ 3._____

DOS and DON'TS

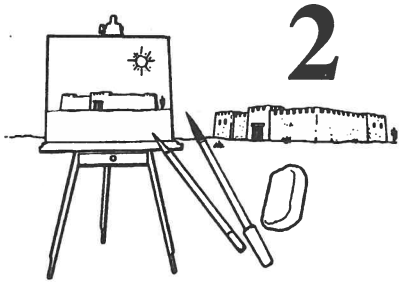
Some of the pictures below show actions that a Deputy Teenage Mutant Ninja Turtle does to be a good steward of America's cultural heritage. Circle these. Some of the pictures below show actions that the evil foot clan would do to harm America's cultural resources. Draw an X through these pictures.

1

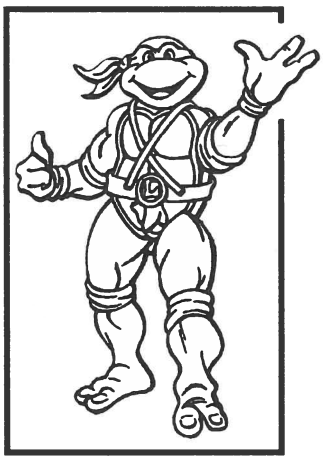


Draw graffiti

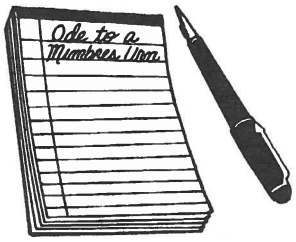
2



Paint a picture



3

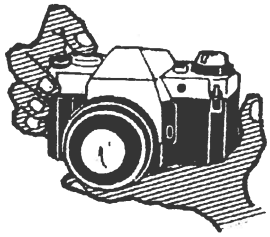


Write a story

4

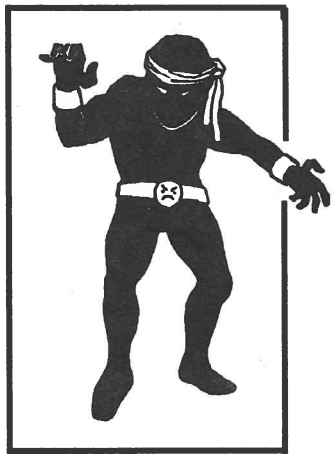


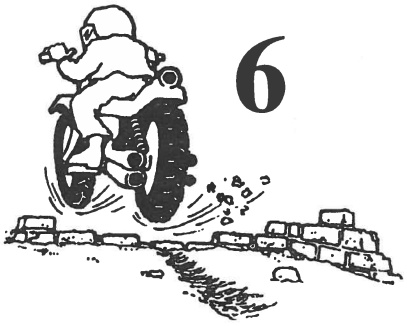
Spray paint



5

Take a photo





6

Bike across



7

Walk on walls

8



Take objects home

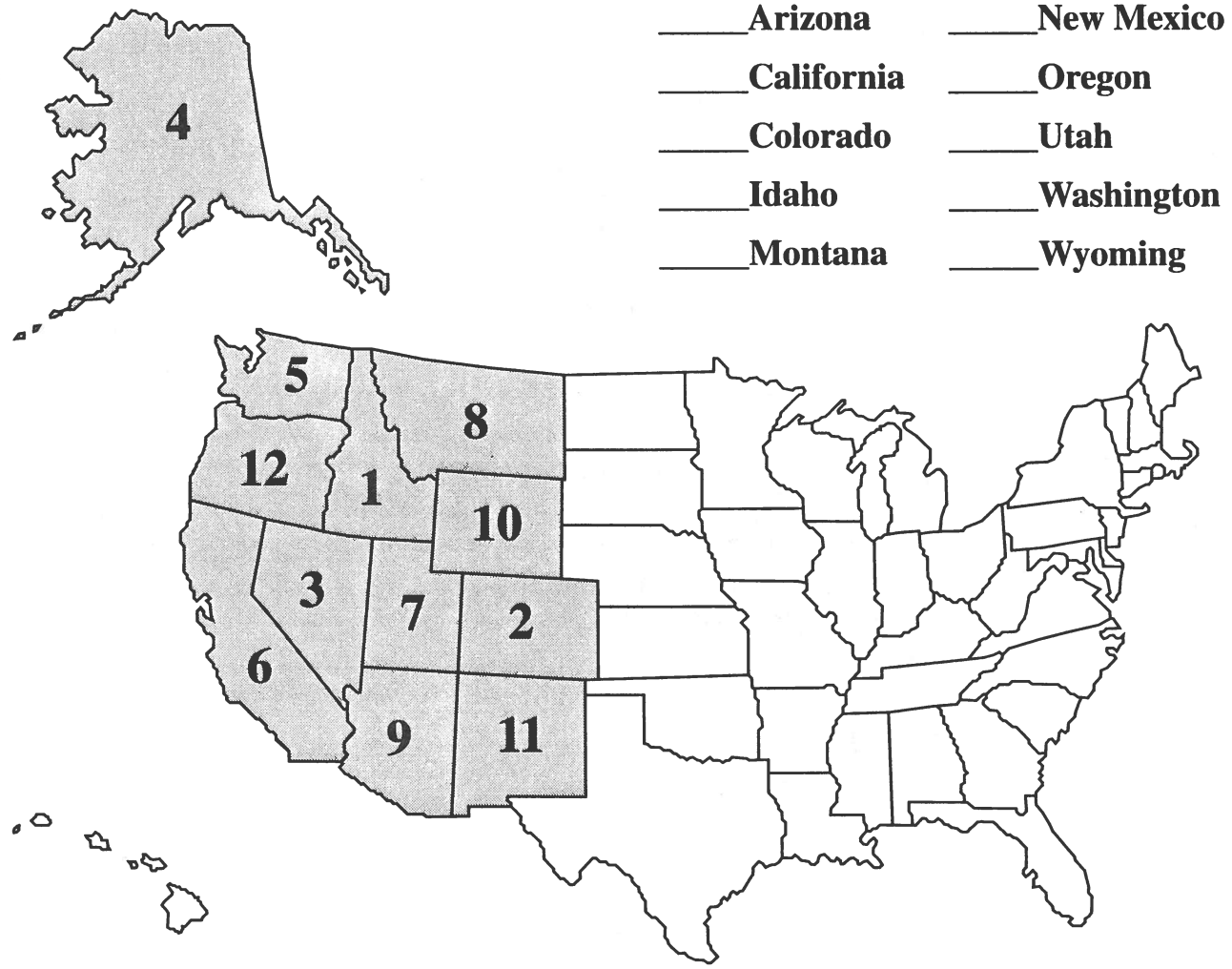
True or False?

One of the Teenage Mutant Ninja Turtles did something which could harm the petroglyphs he discovered in the cave.

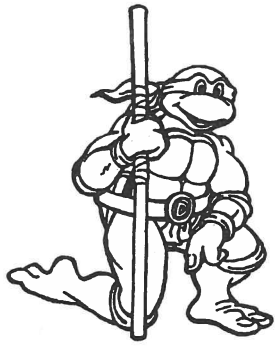
Name the States

The shaded areas of the map show where most of your Public Lands are located. The Bureau of Land Management takes care of these lands with help from all Americans. Can you name the states with Public Lands? Write the number of the state next to its name at the left.

_____Alaska	_____Nevada
_____Arizona	_____New Mexico
_____California	_____Oregon
_____Colorado	_____Utah
_____Idaho	_____Washington
_____Montana	_____Wyoming







**"Hey Dudes — Great idea —
Invite an archaeologist or historian to visit your class.
Call your local BLM office, local university or
state historic preservation office for
archaeologists and historians in your area."**

KEY

Maze

On his way home, Donatello discovers these natural wonders: 10. stream, 3. mountains, 1. deer, 5. owl, 12. waterfall, and 7. desert. He also discovers these cultural resources: 2. fort, 9. petroglyphs, 8. cliff dwelling, 11. arrowhead, 6. pioneer cabin, and 4. mining relics.

Choose the Right Answer

1e. - even though sherds are from broken pots, they can tell us many things, such as the style of pottery, the technology used to make the pot, and an estimation of the size and shape of the unbroken vessel. People at different times and places made different styles of pottery, so a sherd can even tell us its age and the culture of its maker.

2c. - there was no true writing system in North America prior to European contact. We do not know the meaning rock art had to its makers.

3d. - like pottery, the style of an arrowhead can tell us its approximate age and the culture of the person who made it.

4d. - people who make structures meant to be permanent are not usually nomads. Nomadic people live in tents, caves, or structures that can be assembled in a hurry using locally available materials, such as grass and brush.

True or False? (page 2)

1. False. Archaeologists learn about people of the past by studying the things they left behind. Dinosaurs and people were not on the earth at the same time – dinosaurs died out 65 million years before humans appeared. Paleontologists study dinosaurs, plants and other fossils.

2. False. Historians study past events by examining written records and other material evidence of human activity.

3. False. Sites can reveal wonderful, exciting and mysterious stories about cultures that no longer exist, and can show us how we have affected and been affected by the environment. These lessons from the past can help us solve modern day problems. Sites almost never contain gold.

4. True. Many of America's millions of archaeological and historic sites are in remote locations and are not guarded by rangers. Everyone is on the honor system when visiting these sites.

5. True. These lands belong to all of the people of the United States, and are managed on behalf of the American people, present and future, by the Bureau of Land Management.

6. False. Everyone can protect historic and archaeological sites by never collecting artifacts and by reporting anyone they see damaging sites to rangers or police.

Matching

A21, B34, C42, D53, E15

Dos and Don'ts

Do's: 2, 3, 5 Don'ts: 1, 4, 6, 7, 8

True or False? (page 5)

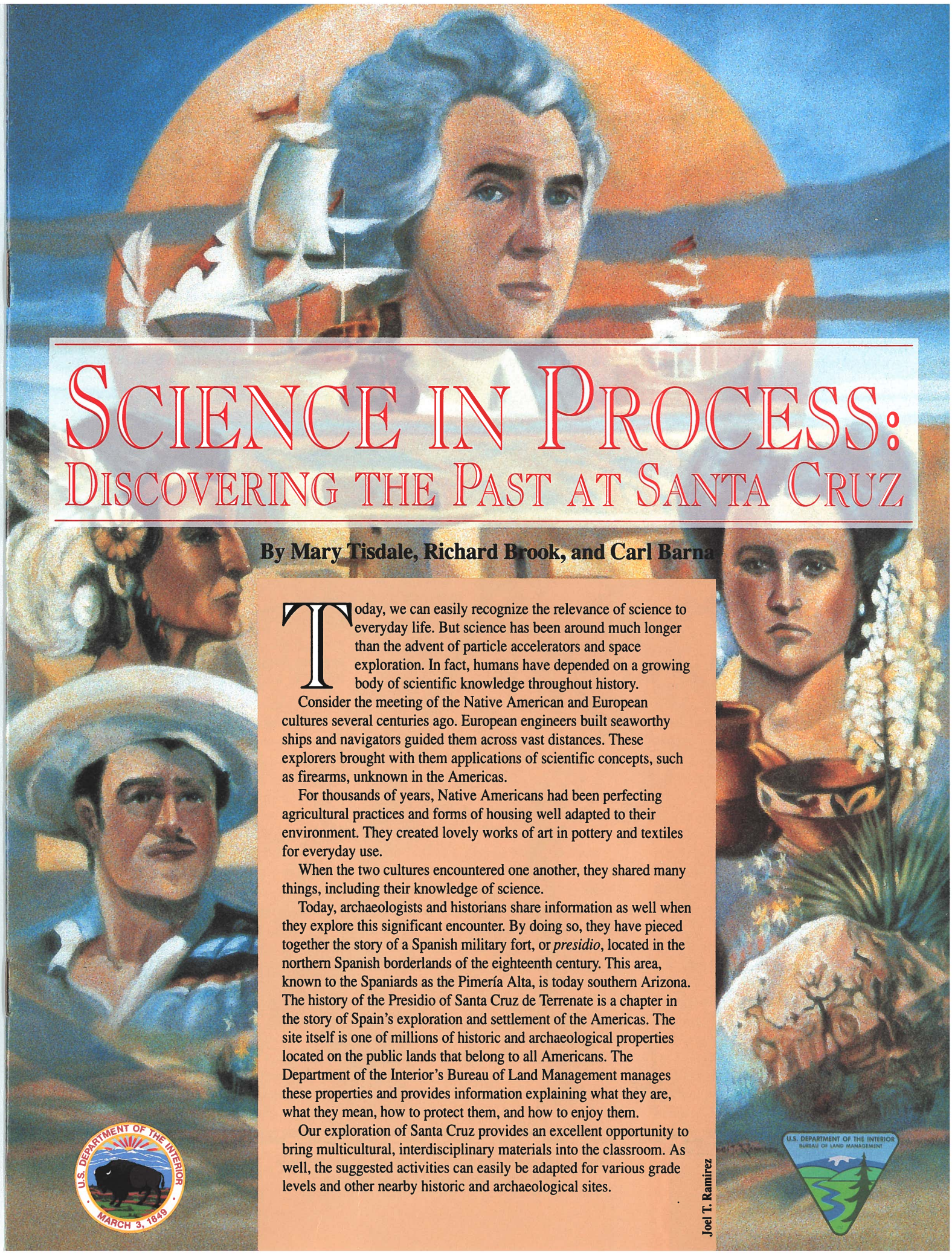
True. Donatello innocently *touched* the petroglyphs when he was explaining to Michaelangelo that the petroglyphs tell a story about the people who lived there long ago. Donatello did not realize that by touching the petroglyphs he could damage them. Touching can cause the paint in pictographs and the rock in petroglyphs to flake away and destroy these ancient pictures. Even people with good intentions need to learn the *Dos and Don'ts* of protecting our nation's cultural resources and share what they learn with others.

Name the States

1–Idaho, 2–Colorado, 3–Nevada, 4–Alaska, 5–Washington, 6–California, 7–Utah, 8–Montana, 9–Arizona, 10–Wyoming, 11–New Mexico, and 12–Oregon (Note: small parcels of public lands managed by the BLM are also scattered throughout the Eastern United States.)

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SCIENCE IN PROCESS:
DISCOVERING THE PAST AT SANTA CRUZ

By Mary Tisdale, Richard Brook, and Carl Barna

Today, we can easily recognize the relevance of science to everyday life. But science has been around much longer than the advent of particle accelerators and space exploration. In fact, humans have depended on a growing body of scientific knowledge throughout history.

Consider the meeting of the Native American and European cultures several centuries ago. European engineers built seaworthy ships and navigators guided them across vast distances. These explorers brought with them applications of scientific concepts, such as firearms, unknown in the Americas.

For thousands of years, Native Americans had been perfecting agricultural practices and forms of housing well adapted to their environment. They created lovely works of art in pottery and textiles for everyday use.

When the two cultures encountered one another, they shared many things, including their knowledge of science.

Today, archaeologists and historians share information as well when they explore this significant encounter. By doing so, they have pieced together the story of a Spanish military fort, or *presidio*, located in the northern Spanish borderlands of the eighteenth century. This area, known to the Spaniards as the Pimería Alta, is today southern Arizona. The history of the Presidio of Santa Cruz de Terrenate is a chapter in the story of Spain's exploration and settlement of the Americas. The site itself is one of millions of historic and archaeological properties located on the public lands that belong to all Americans. The Department of the Interior's Bureau of Land Management manages these properties and provides information explaining what they are, what they mean, how to protect them, and how to enjoy them.

Our exploration of Santa Cruz provides an excellent opportunity to bring multicultural, interdisciplinary materials into the classroom. As well, the suggested activities can easily be adapted for various grade levels and other nearby historic and archaeological sites.

Joel T. Ramirez



These thimbles and broken iron scissors were among the domestic items excavated at Santa Cruz.

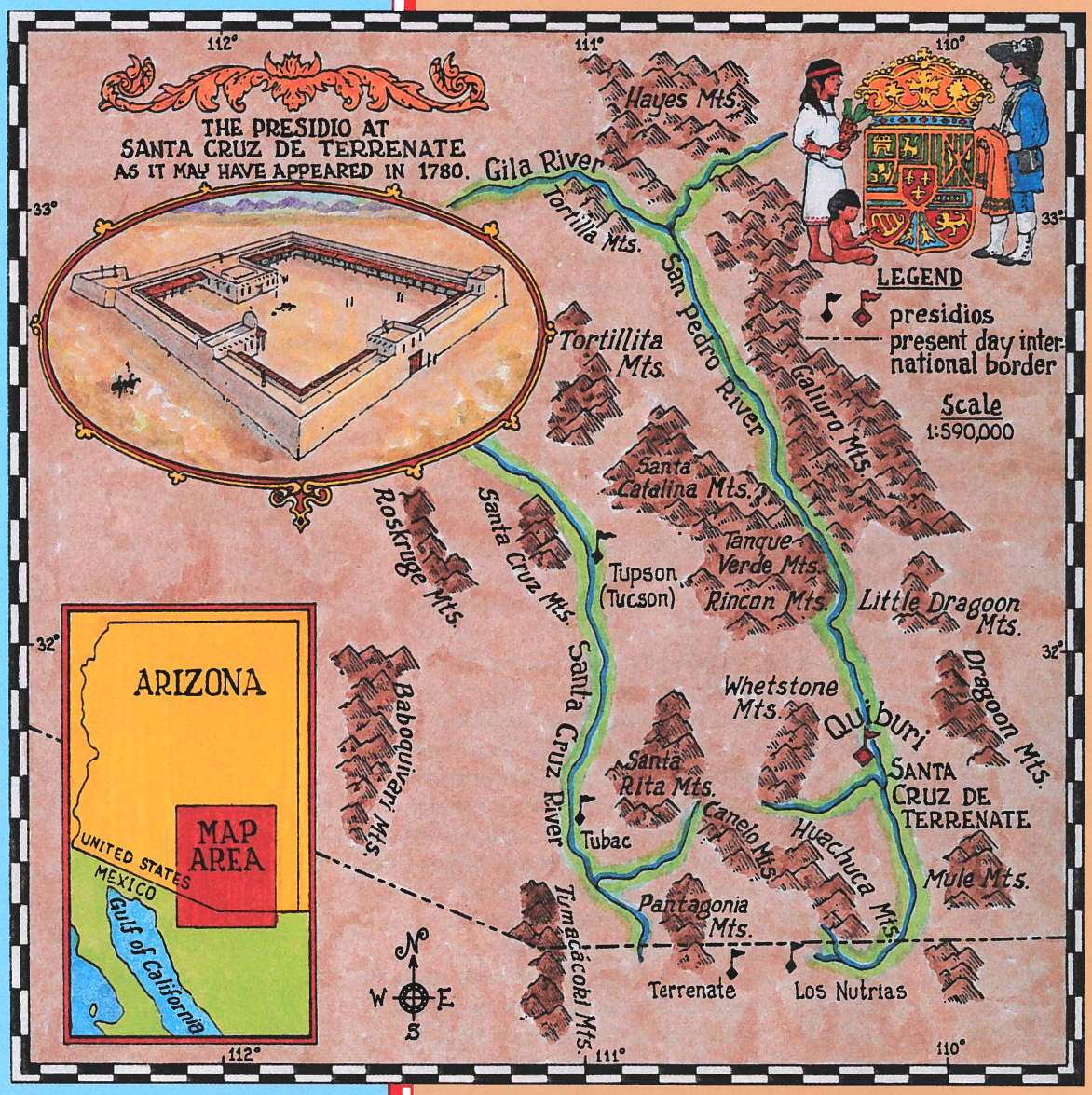
The Story of Santa Cruz de Terrenate

When the Spanish explorer Francisco Vázquez de Coronado passed through the San Pedro River valley in 1540, he entered a land already inhabited by people for at least 11,000 years. It is for one of the peoples of this area, the Sobaipuri Pima, that the Spanish eventually named the region the Pimería Alta, or "Land of the Upper Pima." These village-dwellers subsisted on maize, squash, and beans, and wild plants and animals. Their homes, made of brush and mud, were sturdy and well suited to a hot, dry climate. The Pima traded with neighboring tribes, as evidenced by the presence of *Glycymeris* shell from the Gulf of California and metal objects obtained in the mid-1600s from Spanish settlers farther east.

By the middle of the eighteenth century, Spain had abandoned its dreams of obtaining gold and silver from the fabled "Seven Cities of Cibola," purportedly located in the upper Rio Grande valley of present-day New Mexico. Neither that area nor northern Sonora had produced the gold and silver of central Mexico and Peru. Denied the riches they sought, the Spanish increased their efforts to christianize the native peoples and to defend their vast empire.

To meet these goals, the Spanish had to overcome several obstacles. Most important, they had to provide military protection to the missions, settlers, and christianized Native Americans who allied themselves with the Spanish. Protection was needed against the western Apache and other tribes who lived a nomadic life-style, hunting and raiding to survive. To provide security on the mission frontier, Spain established a defensive line of presidios. According to the Royal Regulations of 1772, presidios constructed to a standard plan were to be placed forty leagues (one league equals approximately 4,180 meters) apart and linked by regular patrols. "The Line," as it was called, would bar nomadic raiders from New Spain's northern frontier.

Puting these events within the context of American history, consider that on July 2, 1775, George Washington arrived in Cambridge, Massachusetts, to take command of the newly established



Map illustration and artist's rendering of the Presidio as it might have looked at completion.

Continental Army. The day before and nearly a continent away, Francisco Tovar completed the muster of his small band of presidial soldiers assigned to Santa Cruz. Fate was to take these two commanders, so close in time and duty, down vastly different paths. After years of seemingly hopeless struggle, Washington and his soldiers were to earn the love and acclaim of their countrymen by winning America's War of Independence. Within a year, Tovar and most of his men would lie dead and forgotten in a remote corner of today's Arizona.

The Presidio of Santa Cruz was established on a steep bluff overlooking the San Pedro River on December 10, 1775. By that time, the effects of the European population on the natives, including the Pima of northern Sonora, had already been felt. European disease, notably smallpox, had a devastating impact on the Aztec of the central valley of Mexico. Its spread far outpaced the actual arrival of the Spanish in Pimería Alta. By then, disease and Spanish slave raiding had drastically reduced the Pima population, making them vulnerable to the Apache, who were themselves being pushed by the Comanche and other tribes westward and southward into Pima territory. Historic accounts reveal that by the time Santa Cruz was built, the Pima had relocated westward to the Santa Cruz River valley because they could no longer effectively fend off the Apache. Archaeologists have identified one earlier period of occupation at the site that ultimately became Santa Cruz—that of the Hohokam tribe, whose culture there dates to the thirteenth century. The Hohokam may be ancestors of the Pima.

Nicolas de Lafora, a military engineer and map maker, recommended that the Presidio of Santa Cruz be established so that the settlers could gather under its protection. The adobe Presidio consisted of a walled compound measuring about 121 varas by 103 varas (one vara equals approximately 83 centimeters), which enclosed a large open plaza. The height of the walls, still under construction in early 1779, varied from 2.5 to 4.5 varas. By this date, approximately 3,592 pesos (about $60,000 today) had been spent on construction. Within the plaza were the commander's quarters, a church, storehouses, settlers' houses, and soldiers' quarters. Eventually over 300 people, including soldiers, their families, and settlers, came to live at Santa Cruz. Historic accounts indicate that the population was multicultural, consisting perhaps of 20 to 30 percent free African blacks and an equal percentage of native peoples—Opata scouts from northern Sonora, Pima from the Tucson area, and other tribes from central Mexico.



A soldier and settler in front of the Presidio entrance.

Spain's resources in terms of men, money, and materials could not match the task at hand. For nearly five years, from 1776 to 1780, the Apache posed the same threat to the Spaniards as they had to the Pima. The raiders struck repeatedly at Santa Cruz, capturing horses and cattle and burning houses and crops. Many Spaniards and their Native American allies lost their lives. Two presidial commanders and more than 80 soldiers were killed.

For the soldiers and settlers it was no longer a question of holding "The Line" or of expanding and defending Spain's empire along the northern frontier. Finally, in 1780, after the expenditure of thousands of pesos and scores of lives, the Presidio of Santa Cruz was abandoned.

In 1781, Teodoro de Croix, the new frontier commander, explained that he had abandoned the site because

> the terror instilled in the troops and settlers of the Presidio of Santa Cruz that had seen two captains and more than 80 men perish at the hands of the enemies in the open rolling ground at a short distance from the post, and the incessant attacks that they suffered from numerous bands of the Apache, who do not permit cultivation of the crops, who surprise the mule trains carrying effects and supplies, who rob the horse herds, and put the troops in the situation of not being able to attend to their own defense, making them useless for the defense of the province. (Williams 1986)

Santa Cruz remained silent until archaeologists arrived in the middle of the twentieth century to begin excavation.

Setting the World Stage

To set the stage for activities presented on the next few pages, try the following:

➢ Compare a map of the world today with a map from the fifteenth century before Columbus made his journey. Explore how the map has changed over the last 500 years with new discoveries, map-making technologies, and shifting political boundaries. Discuss ways the world map may change over the next 500 years.

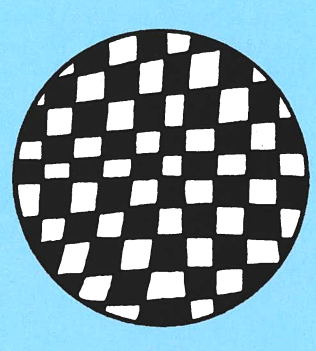
➢ Acquire the earliest map of your hometown. How does it differ from a current map? Examine the spelling of place names and the locations of mountains, rivers, lakes, and other features. Try to find out how these places got their names.

➢ Locate a written history of your hometown. Why did settlers come to the area?

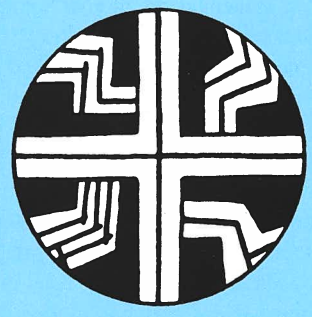
➢ Trace the major world trade routes in 1492. What goods were exchanged along these routes? Review the economic, religious, and political factors that prompted Columbus to seek a westward path from Europe to the "Indies." (The Spanish wanted to spread Christianity and to gain access to Asian spices, silk, and other products.)

➢ Trace the path of Columbus's four voyages. Hypothesize and investigate the types of navigational techniques and devices in use at the time (such as dead reckoning and latitude sailing). Why did Columbus go southward from Spain to the Canary Islands before turning west?









Pottery designs on local Red-on-brown pottery.

➢ Have students identify cities on the same latitude and longitude as their hometown.

➢ How did America get its name? Why wasn't it named for Columbus?

➢ Discuss Spanish exploration in the Americas. Did they succeed in finding the riches they sought? In christianizing the native peoples?

➢ Research how the Spanish divided the Americas into states, provinces, and territories. Did the named provinces have boundaries? How do these territorial boundaries relate to the boundaries of modern countries? Were the names of the Spanish provinces the same as current names? Were the province, territory, and city names all in Spanish, or did the Spanish sometimes adopt existing place names?

➢ Using historic accounts by missionaries, soldiers, and explorers, examine the Spanish view of the native population. What did the Spanish bring with them that changed the lives of these people? (They brought Christianity, foreign disease, horses, cows, pigs, chickens, wheat, oranges, and sugarcane, for example.)

➢ How did the native populations view the Spaniards? What did the natives share with the Spaniards? (They introduced the Europeans to maize, potatoes, beans, squash, pineapples, turkeys, and tomatoes.)

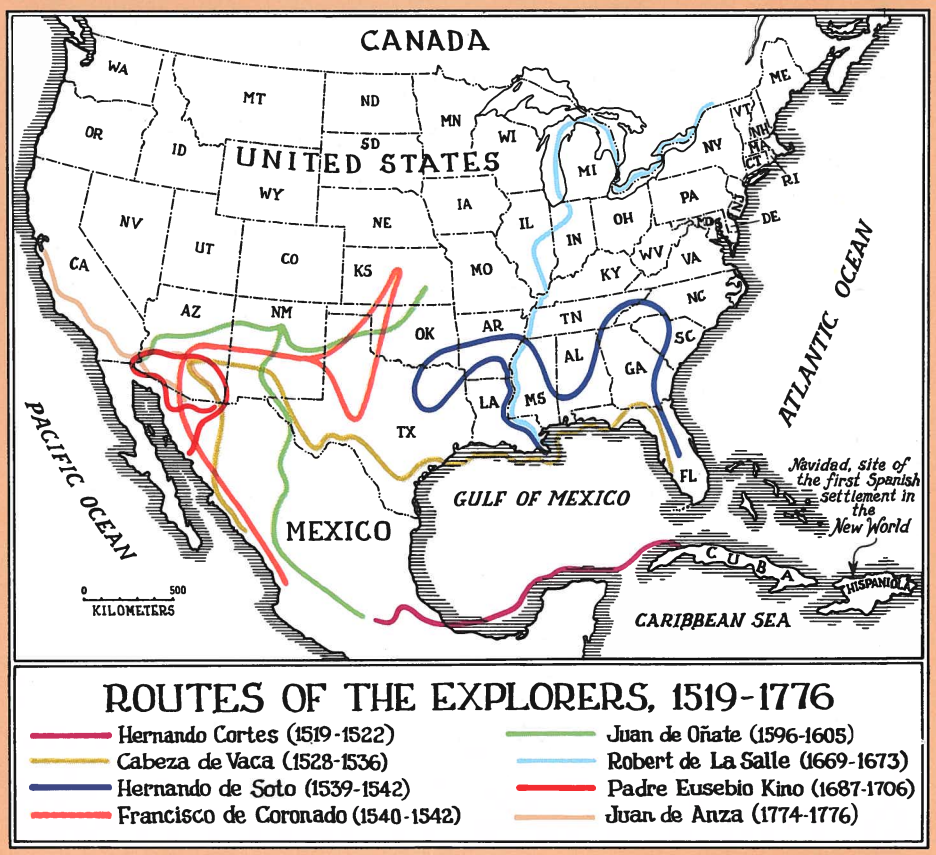
Artifacts in Context

How did archaeologists and historians determine that both Native Americans and Spaniards lived at this site during two periods of occupation—one almost 900 years ago, the other 200 years ago? Just like detectives gathering clues, archaeologists who excavated Santa Cruz examined the objects that people made (artifacts) and where they left them (context) to piece together the story.

Because the excavation of a site destroys it, archaeologists carefully record on paper the location of all objects and structures as they are uncovered. Future researchers can study a site they've never seen if good notes and maps are made of the excavation. Recording the context is the key to interpreting a site from archaeological records. The disturbance or removal of "clues" makes an archaeologist's job more difficult, if not impossible.

Archaeologists maintain context with a grid, a Cartesian coordinate system set up using a surveying instrument (usually a transit or alidade), measuring tapes, and wooden stakes.

A site is measured in squares, usually one or two meters in size. Wooden stakes mark each square corner, and each square has a unique designation—the coordinates of one of its corners. The coordinates indicate the distance of a given point north, south, east,



Solve the Mystery of Santa Cruz

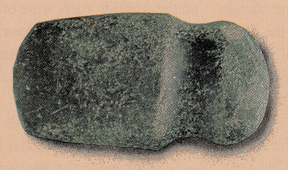


Majolica pottery sherds



bronze medallion





stone axe

Who lived here?



belt hook for sword scabbard



Sobaipuri Plainware pot

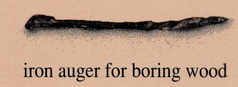


mano and metate

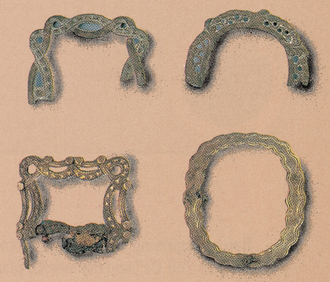




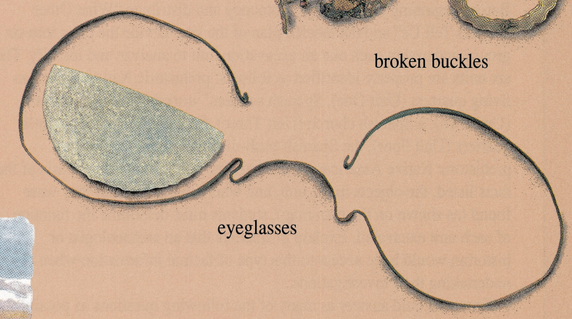
Artist's reconstruction of the Presidio of Santa Cruz de Terrenate, *circa* 1780.



iron auger for boring wood



broken buckles



eyeglasses



silver coin dated 1771



bronze hinge

What do these objects reveal about the past?



earring



Mimbres Black-on-white pottery sherd

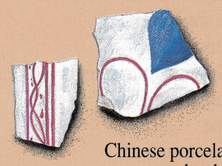
Why did people abandon the area?



arrowhead



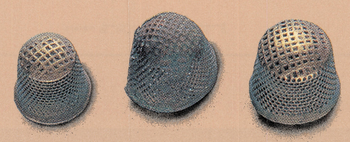
iron nails



Chinese porcelain pottery sherds



bronze crucifix



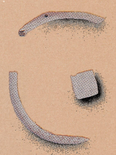
bronze thimbles



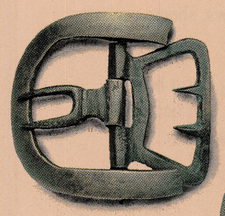
iron hand sickle

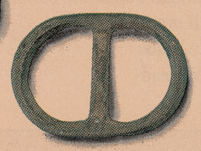


tip of sword scabbard



Glycymeris shell bracelet

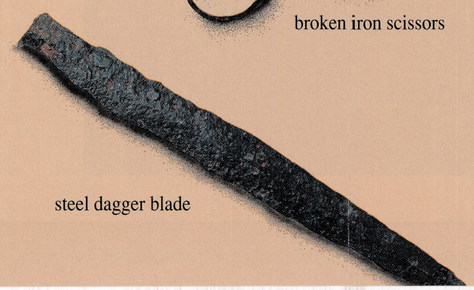




buckles



star rowel from spur



steel dagger blade

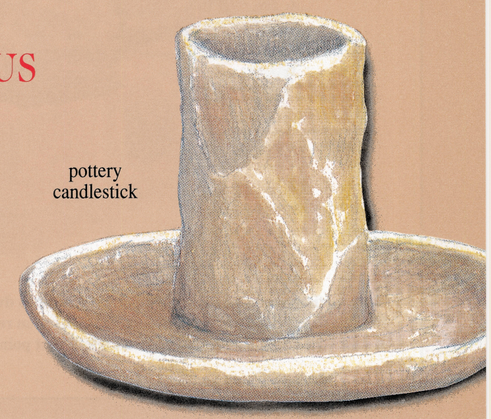


broken iron scissors

How can science help us solve the mystery?



pieces of gunstock decoration



pottery candlestick

Piecing Together the Past with Science

An Excavation Investigation

Before beginning this activity, photocopy and distribute "What Other Sources Tell Us" and the labeled plan of the site. Divide the class into six groups and assign each one an excavation unit to analyze and identify. The six units are properly identified as follows: prehistoric Native American living quarters (Unit One), Spanish soldiers' workshop/living quarters, (Unit Two), a Spanish church (Unit Three), the Spanish commandant's quarters (Unit Four), the Spanish trash-disposal area (Unit Five), a prehistoric Native American cremation area (Unit Six). On the basis of the facts listed, the objects in the unit, and where in the Presidio they were found (as shown on the plan map), students must determine the function of each unit excavated. Explain to students that an archaeologist or historian would have access to this type of factual information when undertaking their investigations.

Groups should answer as many of the following questions as possible based on the fact list and the artifacts and features found in their excavation units. Then the class should reconvene and attempt to answer the questions that involve comparing different parts of the site and establishing broader site patterns. There may not be enough information available to answer completely every question. In these cases, have students identify what additional information they need.

➢ What inferences can you draw from the objects and remains found in your excavation unit? Who left them there? Is there evidence of trade? How old are the items?

➢ What can you infer about how the space may have been used based on what was found in your excavation unit?

➢ A predatory minnow was a local food source from the earliest period of human occupation through the Spanish period. Where does this fish occur today? What could account for this change?

➢ List the different types of raw materials found in your excavation unit. Then classify the artifacts according to whether the materials were locally available or came from a distant source, and whether they arrived as raw material or finished products. How could these goods have made their way to Santa Cruz?

➢ What can you infer from studying the human remains at a site and the objects buried with the remains? Were the dead cremated or buried? What do the different approaches suggest about the beliefs and life-styles of the people?

➢ How would you explain the presence of Native American artifacts in rooms that were occupied by the Spanish?

➢ Calculate the distance between Santa Cruz and the Gulf of California, where the *Glycymeris* shell originates. How long would it take to walk there? Write a story about Santa Cruz traders from prehistoric times. What would they trade for shell? What dangers and surprises might be encountered along the way?

➢ All people everywhere have several basic needs: food and water, protection from the elements (clothing and housing), reproducing their culture (marriage, kinship, education), and explaining their world (religion, philosophy, science). Have students create a chart comparing and contrasting how the Native Americans and Spanish at Santa Cruz met these basic needs.

➢ If coins dating to the 1740s were found at Santa Cruz, what can you infer about the time period that people occupied the site?

➢ Have the children write a story about the life of a Native American or Spanish child based on the archaeological investigation.

What Other Sources Tell Us

➢ Mimbres Black-on-white pottery, from southwest New Mexico, dates from A.D. 1100 to 1250.

➢ Tanque Verde Red-on-brown, pottery made by the Hohokam nearby, dates from A.D. 1200 to 1400.

➢ Fairbank Plainware, another pottery made by the Hohokam, dates from A.D. 1200 to 1400.

➢ Whetstone Plainware, pottery made by the Pima nearby, dates from A.D. 1500 to 1700.

➢ Sobaipuri Plainware, the predominant local pottery found at Santa Cruz, was probably made by the Pima.

➢ In the prehistoric period, shells were obtained from the Pacific coast and the Gulf of California, while in the historic period, they may have been brought to Santa Cruz by Spanish Jesuits.

➢ Majolica, the predominant Mexican pottery found at Santa Cruz, was manufactured in Puebla, Mexico, from A.D. 1750 to 1800 and was brought in by settlers.

➢ Green lead glazeware, used for olive jars, was made in Seville and Cádiz in Spain and was the only artifact at Santa Cruz of definite Spanish origin.

➢ According to historic records, the church at Santa Cruz was used for five years, A.D. 1775–1780.

➢ Colonial residents at Santa Cruz often buried their dead beneath the floor of the church in an extended position with hands held as in prayer.

➢ Buttons often indicate the owner's wealth or military rank.

➢ Ceramic candlesticks were an attempt by the Pima to imitate Spanish iron candlesticks.

➢ Chinese porcelain reached Santa Cruz on the *Manila* galleon to Acapulco, through Guadalajara, up the west coast of Sonora, to Pimería Alta by mule train.

➢ A date on a coin found in an archaeological context indicates the earliest date the coin could have been deposited at the site.

➢ Spaniards are known to have reused stone from earlier period structures when building Santa Cruz.

➢ The prehistoric inhabitants of Santa Cruz were farmers living in small villages who cultivated maize, beans, squash, cotton, and melons.

➢ The predatory minnow, a food source once found locally in the San Pedro and lower Gila rivers, is now extinct there.

➢ The Native Americans of the Southwest, in contrast to the Spaniards, relied on wild animals rather than domesticated animals.

➢ The earliest structures at Santa Cruz, dating from A.D. 1100 to 1250, were badly marred by structures built over them in the later period.

➢ Historic records indicate the Spaniards burned remaining earlier period Native American structures to clear the interior plaza area.

➢ The Pima replaced their artifacts (bone awls, stone hoes, and stone knives, for example) with Spanish counterparts (steel knives and hoes, iron nails).

➢ Because guns were difficult to maintain and acquire on the frontier, parts were often reused on other weapons or for other purposes.

➢ The Hohokam often cremated their dead with food offerings; the remains were then placed in pots or in pits directly in the ground.

➢ Shell bracelets and beads found in the cremation pits were probably personal items of adornment that once belonged to the deceased.

➢ A mano is a shaped stone used for grinding food. A metate is the stone slab on which the food is ground.

➢ Metal objects probably first became available to the Pima in Pimería Alta in the 1650s through trade with Spanish settlers living farther east.

➢ Applique is metal ornamentation or decoration that was applied to the stock of a gun.

➢ A rowel is a sharp-toothed wheel inserted into the end of a spur.

➢ A bronze hinge found just outside the church is believed to be part of a window frame.

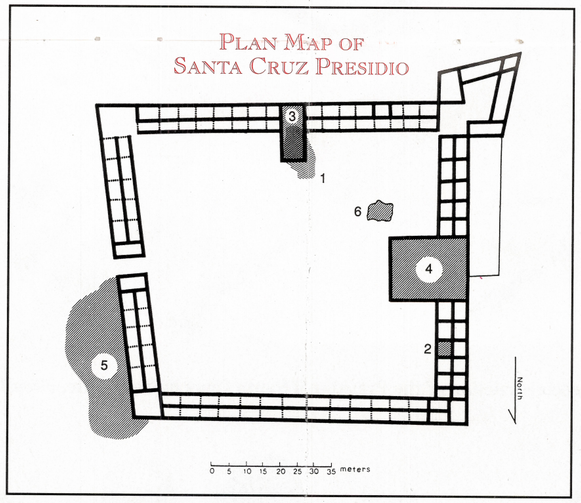
The facts listed above may apply to more than one excavation unit.





These artist's reconstructions of a Native American dwelling and cremation pits represent areas that predate the Presidio. In reference to the painting on reverse, the dwelling was where the figure of a priest is seen. The cremation pits were to the left of that point, where the painting depicts a man and burro.

Plan Map of Santa Cruz Presidio



Aerial Photograph of the Site at the Time of Excavation



Artifacts and Features of Six Excavation Units

Unit One
- 597 Fairbank Plainware sherds
- 253 Tanque Verde Red-on-brown sherds
- \+ 9 Mimbres Black-on-white sherds
- fire hearth containing the broken bones of deer, rabbits, and predatory minnows
- * *Glycymeris* shell bracelet
- \+ mano and metate
- * stone axe

Unit Two
- 207 Sobaipuri Plainware sherds
- 173 Whetstone Plainware sherds
- \+ 5 Majolica sherds
- 1 green lead glazeware sherd
- fragment of charred basket
- stone pot polisher
- arrowshaft straightener
- arrowhead
- * complete Sobaipuri Plainware pot
- lead crucifix base
- bronze shoe buckle
- Jesuit medallion
- * 5 hand-wrought iron nails
- * steel dagger blade
- fork tine
- copper mirror back
- iron hoe
- * iron belt hook for sword scabbard
- * iron hand sickle
- * iron auger for boring wood
- * three bronze thimbles

Unit Three
- 20 human burials
- * bronze crucifix
- copper and lead buttons
- \+ earring
- * bronze medallion
- * bronze hinge

Unit Four
- * eyeglasses
- 6 gilt (thin layer of gold) buttons
- * silver coin dated 1771
- \+ 2 Chinese porcelain sherds
- \+ ceramic candlestick
- * intact buckles
- * iron tip of sword scabbard

Unit Five
- 499 Sobaipuri Plainware sherds
- 12 Whetstone Plainware sherds
- 37 Majolica sherds
- * pieces of gunstock applique
- * 4 broken buckles
- * star rowel
- gun parts
- * broken iron scissors
- * steel dagger blade
- bones of domesticated cows, sheep, and pigs

Unit Six
- 24 pits filled with partially burnt human bones, heavy black ash, and occasional animal bones and corn kernels
- shell bracelet
- slate beads
- * arrowhead

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* Photograph on poster

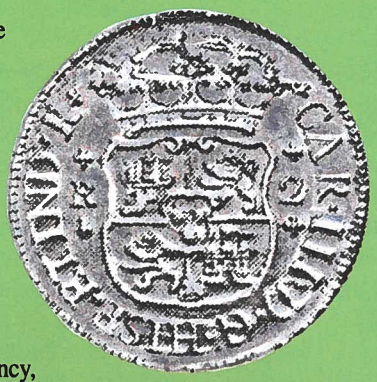
\+ Artist's rendering on poster

Artwork by Shelly Fischman. Photographs by Robin Stancliff, courtesy of The Amerind Foundation, Inc. Text by Mary Tisdale, Richard Brook, and Carl Barna of the Bureau of Land Management.

What a Coin Can Tell Us

Archaeologists found this Spanish coin at Santa Cruz. The study of coins, called numismatics, tells archaeologists and historians much about the past. A variety of techniques, ranging from simple to complex, can glean this information.

By simply observing a coin's symbols, or iconography, we can learn about a nation's leaders, national events, or beliefs. Coins bearing dates help archaeologists to date a site. Using the principle of *terminus post quem* (the date after which), a site can be dated by the newest object found there.





Sophisticated techniques answer more complex questions about the past, such as coinage standards and metallurgical skills. For example, a nation may periodically debase its currency, using poorer metals or increased percentages of them, when facing periods of political or economic stress. X-ray fluorescence analysis using a spectrometer can establish a quantitative indication of the metals comprising a coin. The technique measures the amount of energy each metal in the coin emits when bombarded by X rays. This illustrates how the relative amounts of metals in coins have changed over time.

The specific gravity of a coin, or the ratio of its mass to that of an equal volume of water, can also be used to measure the coin's purity in gold or silver.

Discuss with students the concepts of observation and inference. Ask students to determine which of the following statements about the coin on this page are observations and which are inferences.

The date 1768 appears on the coin. (observation)

The Spaniards could read and write. (inference and observation)

Pictures of a lion and a castle appear on the coin. (observation)

The Spaniards could extract and process metals. (inference)

➢ Have students work together to design a coin that features values important to them. Exchange designs and have student groups write statements of observation and inference about another group's coin design.

➢ Translate the Latin words on the coin into English. What do they signify and why was Latin used?

➢ Research how scientists find gold and silver deposits.

➢ Review the process of decomposition and the rates at which various materials decompose. Discuss the effect of climate and soil on the process of decomposition. Wet, acidic, sandy soil quickly attacks metal objects. Dry climates preserve certain types of remains, such as textiles.

➢ Discuss how our interpretation of the past might be skewed if people used objects that deteriorated quickly.

➢ Research the cultural heritage of your community to learn what various groups have contributed in terms of language, customs, values, religion, building styles, art forms, government, education, and occupations.

or west of the site datum (0,0). Everything found within a particular square is identified by that square's number, and every object can then be tied back to its place in the site.

Try these activities to demonstrate the importance of context.

➢ Divide the class into groups of five or six students and assign each group a different number. The groups then pick a place, such as a hospital operating room, a kitchen, or a hardware store, and decide what objects in the room make it distinctive. Then each student writes one clue on an index card, for a total of five or six clues per group. Each card also has the group number written on one side. The stack of cards from each group is passed to another, until every group has seen every stack and tried to guess each room's function. Students can play additional rounds, making it more challenging by including fewer clues per round until only one clue is left. This demonstrates the type of problem faced by archaeologists when artifacts, or clues, are removed from a site.

➢ Have each student bring in a brown paper bag containing 5-10 personal items. They should give their unlabeled bags to the teacher, who distributes them to the class, making sure that no one gets his own bag. Students then open the bag and infer the behavior or personality of the anonymous owner. They might be able to guess who owns the bag. Each student presents the results of his "study" to the class. They will realize that they can infer the bag's owner only because the artifacts are in context with each other.

➢ On the playground, establish a grid of five-meter squares using measuring tapes, stakes, and string. Have students record the grid location of features on the playground. Using graph paper, explain that each square on the paper corresponds to a square on the ground. By labeling the grid, students can create a map of the playground by plotting the location of their recorded features on the graph paper.

Objects as Evidence

Using shovels, trowels, screens, and measuring tapes, archaeologists uncovered the Santa Cruz site. Each artifact was carefully measured and recorded as it was found. By making observations about the artifacts, archaeologists were able to make inferences about the people who used them.

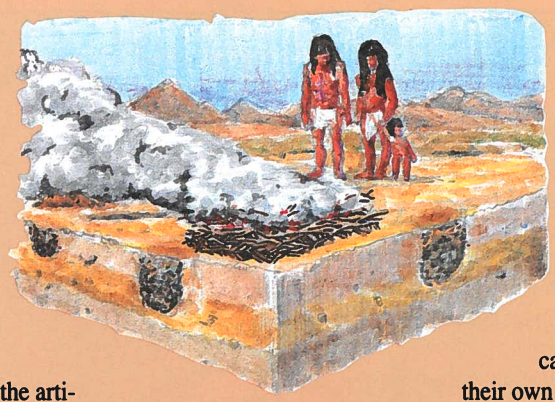
One object found at Santa Cruz was a ceramic candlestick. The candlestick, made of local Sobaipuri Plainware pottery rather than the usual bronze or iron, represents the mixing of the Spanish and Pima cultures. The Spanish may have obtained such artifacts from the local native populations or



Objects excavated by archaeologists at Santa Cruz, including three sherds of commonly found pottery types (from top, Majolica, Tanque Verde Red-on-brown, and Mimbres Black-on-white) and a pottery candlestick. The candlestick, made of local Sobaipuri Plainware rather than the usual bronze or iron, represents the mixing of the Spanish and Pima cultures.

manufactured the items themselves, or a combination of the two.

Native Americans did copy certain Spanish forms, such as soup plates, lipped plates, and cups. Ninety percent of the artifacts recovered by archaeologists at Santa Cruz were of Native American "origin." Historians tell us that the Spanish did not begin to mine iron in the Americas until the late eighteenth century. Before that time, they imported iron in bulk form from Spain. The scarcity of iron may have forced the Spanish to rely on native-made wares, such as pottery and stone tools.



Classifying Objects

In excavating Santa Cruz, archaeologists found thousands of objects. The site contained hundreds of pottery sherds varying greatly in appearance. Rather than comparing every pottery sherd to every other pottery sherd, archaeologists classified them by such attributes as surface decoration and color, clay body, and firing technique. Pictured at left are sherds representing three of the basic pottery types into which archaeologists grouped sherds found at Santa Cruz.

One unusual and easily classifiable type found there is manure-core temper variety. Temper is a substance mixed with clay to prevent a pot from breaking during firing. The core of this manure-tempered ceramic type is dark as a result of using organic cow dung, and often particles of hay fed to the cows can be detected in the sherds under a microscope. Because cattle were not introduced into Pimería Alta until the late seventeenth century, we know this ceramic type was made after that time.

Try the following classification activities with your students.

➢ Divide the class into groups of four or five and give each group a kit that contains about 20 familiar objects, such as bolts, string, rocks, paper clips, and cloth. Have each group organize the objects into categories, using their own classification scheme. When everyone is finished, ask each group to explain what attributes they used to place an object in a certain category—shape, color, or type of material. Ask the class how its scheme would change if certain items or classes of items (say, all red things) were removed. Point out that the removal of artifacts, such as arrowheads, from a site alters the classification and hence the questions that can be answered from the data.

➢ Obtain 5-10 ceramic vessels from a secondhand store for each group of students. Stoneware is recommended, since it typically breaks into a few dozen pieces, while other types of ceramics may shatter into literally thousands of pieces. You may need to experiment. Two of the vessels are to be the same—two cups, for example. The remaining vessels should be different in surface glazing and shape. Break all the vessels and put all of the assemblage pieces together in a shoebox or paper bag. Keep in mind that broken pottery will have sharp edges, so consider the appropriateness of this activity for your class. Students work in groups of three to five to sort and classify the sherds into different categories. When they have finished sorting, ask them how they separated the pieces. By color? Shape? Both? Ask them to infer how many separate vessels are represented and explain how they made the inference.

Next have the students reconstruct the vessels using white glue. Were they right about the number of vessels?

➢ Pottery fired in an oxidizing atmosphere (oxygen freely available) looks distinctly different



Artist's renderings of Native American cremation pits, above, and dwelling.

Real Presidio de Terrenate
Lista de Soldados, Julio 1, 1775

Nombre (Name)		Edad (Age)		Patria (Birthplace)	Calidad (Race)	Robustes (Health)	Circumstancias (Performance)
Sargento	Augustin Goona	40	*	Sonora	Espanol	Buena	Buenas
Cabo	Juan Grijalva	33	*	Sonora	Espanol	Buena	Buenas
Cabo	Manuel Figueroa	55	*	Sonora	Espanol	Mala	Buenas
Soldado	Vicente Galindo	40	*	Sonora	Espanol	Mala	Buenas
Soldado	Pablo Azedo	39	*	Sonora	Espanol	Buena	Medianas
Soldado	Juan Grijalva	34		Sonora	Espanol	Mediana	Medianas
Soldado	Juan Azedo	34	*	Sonora	Espanol	Mediana	Buenas
Soldado	Jose Escalante	35	*	Sonora	Espanol	Buena	Buenas
Soldado	Antonio Romero	38	*	Nueva Vizcaya	Espanol	Buena	Buenas
Soldado	Jose Azedo	32	*	Sonora	Espanol	Mediana	Buenas
Soldado	Cristoval Azedo	33		Sonora	Espanol	Buena	Buenas
Soldado	Jose Espinosa	29		Sonora	Espanol	Buena	Buenas
Soldado	Jose Romero y Leiva	32		Sonora	Espanol	Buena	Buenas
Soldado	Jose Rojas	28		Sonora	Espanol	Buena	Buenas
Soldado	Tadeo Escalante	28	*	Sonora	Espanol	Buena	Buenas
Soldado	Amero Galavis	27	*	Sonora	Espanol	Buena	Buenas
Soldado	Pedro Luis	37		Sonora	Coyote	Buena	Medianas
Soldado	Francisco Grijalve	42	*	Sonora	Espanol	Medina	Medianas
Soldado	Geronimo Gonzales	35	*	Sonora	Espanol	Buena	Buenas
Soldado	Francisco Gonzales	30	*	Sonora	Espanol	Buena	Buenas
Soldado	Bernave Sanchez	45	*	Sonora	Espanol	Medina	Medianas
Soldado	Geronimo Avila	35	*	Sonora	Espanol	Buena	Buenas
Soldado	Julian Pacheco	27	*	Sonora	Espanol	Mala	Buenas
Soldado	Gerardo Gonzales	27	*	Nueva Vizcaya	Espanol	Buena	Buenas
Soldado	Juan dela Parra	26	*	Sonora	Espanol	Buena	Buenas
Soldado	Francisco Yescas	46		Sonora	Coyote	Buena	Buenas
Soldado	Juan Gomez	39	*	Sonora	Coyote	Mediana	Buenas
Soldado	Justo Rovento	30	*	Sonora	Mulato	Buena	Buenas
Soldado	Salvador Garcia	36	*	Sonora	Espanol	Buena	Malas
Soldado	Jose German	30	*	Sonora	Indio	Buena	Buenas
Soldado	Juan Trexo	33	*	Sonora	Mestizo	Buena	Buenas
Soldado	Jose Nevares	39	*	Nueva Vizcaya	Espanol	Buena	Buenas
Soldado	Cristoval Castro	30	*	Sinoloa	Coyote	Buena	Buenas
Soldado	Jose Montoya	25		Sonora	Espanol	Buena	Medianas
Soldado	Francisco Vasquez	25		Sonora	Espanol	Buena	Buenas
Soldado	Francisco Quintero	33	*	Nueva Vizcaya	Coyote	Mala	Buenas
Soldado	Jose Rivera	26	*	Sonora	Espanol	Buena	Buenas
Soldado	Vizente Vrias	44	*	Sonora	Espanol	Buena	Buenas
Soldado	Xavier Grixalva	22	*	Sonora	Coyote	Medina	Buenas
Soldado	Xavier Gurola	20	*	Sonora	Espanol	Buena	Buenas
Soldado	Manuel Palafax	29	*	Sonora	Indio	Medina	Medianas
Soldado	Benito Espinosa	29	*	Sonora	Espanol	Medina	Buenas
Soldado	Jose Neyna	48	*	Nueva Vizcaya	Espanol	Buena	Buenas

Sample of a roll taken by Captain Tovar at Santa Cruz, with terms used by the Spanish defined as they viewed the world.

*** Listed in 1779 inspection return as died or retired (29 of these men fell in the Battle of Las Mesitas on July 7, 1776). Espanol — Born to Hispanic parents in New Spain (Mexico); Mulato — Mixed blood of Hispanic/Native American and African parents; Mestizo — Mixed blood of Hispanic and Native American (Valley of Mexico) parents; Coyote — Born of nomadic or northern ("Wild") Native American parents; Indio — Born of Central Valley of Mexico Native American parents.**

than pottery fired in a reducing atmosphere (oxygen limited during the firing process). If you can obtain samples of the two types, consider exploring with your students why the same pottery will achieve two different effects when fired in these two different atmospheres.

Chronology

Archaeologists and historians attempt to establish the age of sites, artifacts, and events so that they can be placed in chronological order and reveal the story of the past.

We know several ways of determining the age of an object or site. One of the simplest means is based on the law of superposition—objects at the bottom of a buried site are the oldest, and those at the surface are the youngest. While this method establishes relative dates of older and younger artifacts, it does not establish an absolute calendar date. Digging or other disturbance of a site prevents archaeologists from reading its chronology.

At Santa Cruz, two primary methods were used to establish age: historic records and cross-dating. Cross-dating indirectly establishes a date based on styles of artifacts. Artifacts of a distinct style that have been dated at one site can be used to date objects of a similar style found at another site. A modern analogy is automobiles; one would not mistake the style of a car made in the 1920s with one made in the 1990s.

A style of ceramics found at Santa Cruz in association with the Hohokam occupation is known as Mimbres Black-on-white. Archaeologists could date the Mimbres Black-on-white pottery found at Santa Cruz because the same style had already been dated at another site. This pottery type, which originates in the area that is now southwest New Mexico, has been dated there to 1100–1250.

Try this activity to let students conclude on their own that chronology is important.

➢ Have students write on strips of construction paper 10 or 12 significant events in their lives. These events should not have obvious time links, such as "my eighth birthday party." They should then scramble their strips and exchange them with another student, who must try to lay the strips out in correct chronological order. Discuss as a class or team: Were you able to reconstruct the timeline correctly? Why or why not? It is difficult, sometimes impossible, to reconstruct a story if the order of events is not known. Connect this activity to archaeological sites by stressing how archaeological data are usually impossible to place in chronological order if people have removed artifacts.

Historical Records

Our earliest knowledge of the land and peoples of the area can be glimpsed in the diaries, reports, and maps prepared by Spanish missionaries, such as the Jesuit Father Eusebio Francisco Kino who came to the San Pedro in the late seventeenth century. Like any source of information, historians must critically evaluate these documents. Kino named the native settlement



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The archaeological activities in this article were created by a team of educators and archaeologists. Prior to revision, the activities were field-tested and evaluated by 75 educators and their students from a variety of rural and urban settings.

For a free booklet of classroom activities on the fundamentals of archaeology, send a self-addressed, stamped ($1.44) envelope (9" x 12") to Shelley Smith, Bureau of Land Management, Utah State Office (930), P.O. Box 45155, Salt Lake City, UT 84145-0155.

All three authors work for the Department of the Interior's Bureau of Land Management in Washington, D.C. Mary Tisdale is a special assistant for BLM's external affairs office and a former secondary school teacher. Richard Brook is an archaeologist, and Carl Barna a historian.

Artist Shelly Fischman, who completed all renderings in the insert and on the poster (except the painting, page 25, done by Joel T. Ramirez of Albuquerque, New Mexico), also works with the Bureau of Land Management.

that he encountered, at the location of present-day Santa Cruz, Quiburi. Later scholars who used his writings considered the simple living structures found at the Presidio to be the remains of this early village. Today, however, scholars interpret these remains as the first living quarters erected by the Santa Cruz soldiers. The location of "Quiburi" remains a mystery.

Other documents, such as Lafora's diary, provide insights as to why a defensive post was needed along the San Pedro. The Royal Regulations of 1772 tell us about the construction of the posts, about the weapons, pay, and duties of the officers and soldiers at the forts, and about the siting of Santa Cruz de Terrenate. Muster rolls, such as that prepared by Captain Tovar, tell us about the soldiers themselves, such as the number present, their ages, origins, and the sociocultural composition of the Spanish frontier garrisons. Inspection reports of arms and other supplies suggest the state of morale and readiness of the defenders. Teodoro de Croix's letter to his viceroy gives us a vivid and painful picture of the conditions at the Presidio.

To better understand how historians use historical records, photocopy and distribute the muster of soldiers prepared by Captain Francisco Tovar on July 1, 1775 (see preceding page), and have students answer the following questions:

➢ What was the average age? (33.6 years)

➢ What percentage of the troops were of Hispanic descent? Of other descent? (77 percent unmixed Hispanic, 23 percent other ancestry)

➢ Why do you think these natives served as allies of the Spanish? (They allied themselves with the Spanish or other European colonizers for a variety of reasons. Some saw a military alliance with the Spanish as a means to continue warfare against their traditional enemies with the advantage of additional numbers of fighters and weapons. Others saw certain items of European material culture as desirable or superior to their own products and so they allied themselves with Spain in order to secure them.)

➢ What does this information tell you about Spanish policies and conditions on the frontier? (The racial integration of the presidial garrison points out Spain's open-mindedness on cultural issues. More than any other European colonizing power, Spain sought to integrate Native Americans into its colonial society. For example, interracial marriages were accepted, and children of such marriages could advance in Spanish institutions such as the military.)

➢ On a map of Mexico, locate the provinces in which these men were born.

To conclude your unit, have students reassemble their personal "artifacts" and create written materials that tell about themselves. Let the children exchange these and write histories of one another based strictly on the "evidence" provided. Read these aloud. Afterwards, discuss with students the strengths and limitations of both historical and archaeological types of evidence in helping us unravel the stories of the past.

Resources

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The excavation of Santa Cruz, conducted by Charles DiPeso in the early 1950s, was sponsored by The Amerind Foundation, Inc., Dragoon, Arizona. The excavated objects are curated by The Amerind Foundation at their archaeological research institution in Dragoon.



Spanish cross, above, and earring found at Santa Cruz.